

SANDIA LAB NEWS

published every other Friday for the employees of Sandia Corporation, contractor to the Atomic Energy Commission

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ALBUQUERQUE, NEW MEXICO

JANUARY 11, 1957



CONGRESSIONAL VISITOR—Rep. James E. Van Zandt (center) of Pennsylvania, a member of the Congressional Joint Committee on Atomic Energy, recently visited Sandia Corporation and Atomic

Energy Commission officials in Albuquerque. Left is Max H. Howarth, Vice-President and General Manager of Sandia Corporation; right, Kenner F. Hertford, manager, Albuquerque Operations office.

Town Hall Type Meeting Set For Coronado Club

An informal "Town Hall" type meeting between Coronado Club members and the club's board of directors has been set for 7:30 p.m. Tuesday, Jan. 15.

The purpose of the meeting, according to Harold Catt, club president, is to present the opportunity for a "free exchange of ideas" between members and directors concerning constructive measures for improving club activities.

Other events scheduled in the next two weeks include a free dance tomorrow from 9 to 1 featuring the MBC trio, free bridge instruction at 8 p.m. Jan. 14 and Jan. 21 in La Cana Room, Bingo Jan. 16, duplicate and party bridge Jan. 17 and Jan. 24, social hours tonight and Jan. 18, and a movie, "Ride the Pink Horse," to be shown on Family Night, Jan. 20.

March of Dimes Stresses Vaccine Education in '57

January is traditionally the month for the March of Dimes fund-raising campaign of the National Foundation for Infantile Paralysis.

"Coffees" given in private homes serve to "kick-off" the campaign and on Jan. 31 women throughout Albuquerque as well as Sandia Base will participate in the annual "Mothers' March."

This year the emphasis is on vaccine education, according to H. W. Axford, state representative for the national foundation.

Collections will be made through coin boxes placed throughout the city, mailed cards and educational cards given to school children.

Here's a Tale of Common Last-Minute April Foolishness

A preview of the night before Tax Day based on human nature and information from the American Institute of Accountants, the national professional society of Certified Public Accountants, and checked for technical accuracy by the Internal Revenue Service.

Now to figure up that old income tax!

In other words, Ralph, the fight is on: Fight the form, fight the deadline and fight the temper. This is the night of April 14, and tomorrow is the deadline for filing your federal income tax return for 1956. You, like millions of other people, have succeeded in putting off this matter until you have all of one evening to rush through a job that might save you more money than you earn in a week.

* * *

No, Alice, I'll not need your help this year. Too many cooks spoil the soup you know. You sit right there and read your paper.

A typical year's spoiled soup included one million returns filed without signatures—or with only one signature instead of the required two on a joint return). Also, arithmetic errors resulting in overpayment by taxpayers of more than \$19,000,000—not to mention an even larger amount of underpayments. Uncle Sam, who checks every return, catches these errors. But don't expect him to look for all the deductions or exemptions you missed.

* * *

Must get organized! Alice, would you mind bringing me that pen from the dining room table?

Best you bring him a pencil for the first draft, Alice, especially if he is going to itemize deductions. Since Mr. Organizer waited until

T-day-minus-one, chances are he will only have time to repeat last year's performance and take the 10 per cent standard deduction in the end.

But it is early yet, and he realizes that many taxpayers can save by itemizing such expenses as charitable or religious donations, interest paid on mortgages or loans, medical and dental expenses, and state and local taxes.

* * *

Whatever did I do with that tax blank? Alice, dear, how about getting it for me out of my coat pocket in the hall closet?

Alice retrieves beautifully, and she is also good for a \$600 exemption on the tax return. And, Ralph, don't forget to take a \$600 exemption for yourself. Anyone 65 or over gets an additional \$600 exemption, and there is still another exemption for blindness.

These special exemptions for age and blindness do not apply to dependents, but you can get the regular \$600 exemption for each dependent, as explained in the instructions—even when you provide less than 50 per cent support in some cases.

* * *

Alice, how much money did I make last year and where oh where can I get some help in making out this return?

Alice, of course, has Husband Ralph's pay details all carefully filed. They will tell him how much money he was paid and how much

Two Sandians on Program of Third National Symposium

J. W. McRae, Sandia Corporation President, and L. J. Paddison, Director of Quality Assurance, 5500, will appear on the program of the Third National Symposium on Reliability and Quality Control in Electronics in Washington, D.C. Jan. 14-16.

Mr. McRae will moderate a session on Commercial Electronics Reliability. He also served on the Advisory Board responsible for planning the Symposium program.

Mr. Paddison will read a paper entitled "Steps to be Taken to Produce Reliable Products" during the session on Principles for Design and Management of Reliability Programs. He will be a panelist discussing the subject "Basic

Definitions Used in Reliability." Definitions recommended by this panel will be made available for general industry use. Mr. Paddison also served on the Symposium Program committee.

Sandians planning to attend the Symposium include John Kirby 5513, J. C. Connell 5511, H. P. Kelsey 5512, R. O. Frantik 1264, W. M. Sundt 1264, J. M. Wiesen 5125, A. L. Thornton 2712 and G. A. Parker 2700.

P. H. Bircher, 5511, served as Area Publicity Chairman for the meeting.

The Symposium is sponsored by the Quality Control committees or sections of the Institute of Radio Engineers, American Society for Quality Control, American Institute of Electrical Engineers and Radio-Electronics-Television Manufacturers Association.

Boy Scouts Praise Sandians for Help Given Past Year

Kit Carson Council of the Boy Scouts of America has expressed its thanks to Sandia Corporation and military units on Sandia Base for their work with the local Boy Scout organization.

At the recent annual meeting of the Boy Scout organization a resolution was passed praising the cooperation given to the Scouts through the entire year and particularly in connection with the Scouts' recent fund-raising campaign.

The resolution was signed by Ralph S. Trigg, President of the Kit Carson Council and was transmitted to J. W. McRae, President of Sandia Corporation, by George A. Bullock, Scout Executive.

Retired Employee Dies in Cleveland

Funeral services were held in Cleveland, O., for John C. Brasemann, a retired Sandia Corporation employee, who died Dec. 24. He was 68.

Mr. Brasemann retired in Jan. 1954, after four years in organization 2419.

Survivors include his widow and two married daughters.



PREVIEW APRIL 14—The harassed gentleman surrounded by debris in the photo above waited until the very last possible moment before tackling his 1956 Income Tax forms. To avoid this, the American Institute of Accountants advises carefully preparing your return, file early, and save your records for checking in the future.



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Cherry Fellner, Don Graham, Assistant Editors
Robert S. Gillespie, Editor

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Let's Finish The Job--

The tragedy of polio has not ended with the discovery of Salk vaccine.

What of those already stricken — the thousands cut off from the stream of life by crippling polio? Their fight for another chance at life goes on, sparked by the March of Dimes. Helping the stricken is the most costly part of the program for the National Foundation for Infantile Paralysis. Help finish the job.

The Salk vaccine now protects millions of people from paralytic polio. But millions more are still without protection. During 1956, some 16,000 Americans were stricken by polio. The March of Dimes is fighting to protect all America in 1957 — at a cost of \$10,000,000. Help finish this job.

Polio research is still paying heavy dividends. Salk vaccine was one part of the pay-offs. Today, imaginative research is reaping a wealth of new scientific knowledge and giving better insight into life and disease and seeking better ways to overcome human disabilities. Help scientists finish the job.

The skilled hands of highly-trained men and women are needed to finish the job of preventing polio and rehabilitating its victims. But there are just not enough professional workers to meet the needs of the disabled. The March of Dimes is training an army of workers in medical and allied fields. These people will continue to serve long after polio is conquered. Help finish the job!



Welcome Newcomers

Dec. 24 through Jan. 4

From Albuquerque	
Judith R. Baca	7225
Leo Chavez	2461
Carol J. Coulter	7226
Rosie M. Cruz	2331
Savella P. DuBois	2418
Ruth Ann Easton	7225
Ann L. Ercole	7225
Robert G. Fueger	2351
Glen M. Haycock	2351
Martha S. Nader	7225
D. Phyllis Neff	2722
Mabel E. Perriguey	2231
Martha H. Routh	7225
Charlynn Rumbaugh	2353
Bárbara J. Rutherford	7225
Dorothy J. Saiz	7224
Erma V. Sanchez	7225
Fabiola R. Sandoval	7224
Shirley A. Simon	7225
Janice K. Stadler	3151
Lida V. Stover	2222
Octaviano Valdez	2419
Joe S. Valles	2519
Edwin Watkins	4112
Jane E. Williams	3153
Betty J. Zurenda	2353
Colorado	
Morton K. Ohlson of Denver	2320
Illinois	
Mary K. Collins of Chicago	2713
Indiana	
Russell Action of Lafayette	1626
Iowa	
John Risso of Davenport	1282
Louisiana	
Carl E. Johnston, Jr. of Bossier City	2514
Missouri	
Terence Bagett of University City	2463
Arthur B. Hylton of Independence	7411
New Jersey	
Maximilian B. Urbanski of Elizabeth	2151
Edward Whaley of Summit	1423
New Mexico	
Pauline G. Baca of Belen	7225
Delphido Gonzales of Bernalillo	2419
New York	
Leslie Balint of Long Island	5133
Ohio	
Donald K. Hoffheins of Bowling Green	2351
Victor G. Pappas of Cleveland	3151
Pennsylvania	
Lee D. Stull of Williamsport	2154
Wisconsin	
Robert J. Kastner of Kohler	2722

Moving Day

Kelly Fosmo, a newcomer to 2223, and his wife recently moved into their new home at 1836 Kentucky, N.E.

Welcome Back

Division 2223 welcomes back Jane Maples after an extended illness. Also returned after a short stay in the hospital is Jim French, 2223.

Organization 5142 is happy to welcome back Ted Holland after an illness of several weeks.

Congratulations

Born to:

Mr. and Mrs. J. D. Appel, 1263, a daughter, Linda Suzanne, on Dec. 22.

Mr. and Mrs. Dennis Rainey, 7411-4, a daughter, Starla Gaye, on Nov. 27.

Mr. and Mrs. Americo Gianchetti, 7411-4, a son, Wayne Allen, on Dec. 18.

Mr. and Mrs. Wallace A. Hansen, 7412, a son, Lance Alfred, on Dec. 18.

Mr. and Mrs. L. J. Zipprich, 1727-1, a daughter on Jan. 3.

Mr. and Mrs. Woody Bledsoe, 5124, a son, Lance Woodrow, on Dec. 31.

Mr. and Mrs. M. A. Richter, 1611-2, a daughter, Melissa Ann, on Dec. 28.

Mr. and Mrs. Wayne C. McCrary, 5533-1, a son, Michael Wayne, on Dec. 14.

Sympathy

To Stoughton Bell, 5123, for the death of his mother in Boston on Dec. 27.

Engagements

Mr. and Mrs. Hazen C. Schouman announce the engagement of their daughter Faye C. Donaldson to Robert D. Hole.

Faye is in 1626-1 and has been with the Corporation since September. Her fiance is employed in Albuquerque.

The couple plans a mid-summer wedding.

Sandianotes . . .

Christmas Spirit Continues . . .



TEN FAMILIES benefited from the Christmas generosity of Department 1280. Each family received a food basket on Christmas Eve. Helping with deliveries were L. to R. Jack Joyce 1282, Melvin Powers of Furr's Grocery, and Leon Wilson 1281.

Coronado Club Offers Bridge, Dance Lessons

Beginning this month the Coronado Club is offering free instruction in duplicate bridge every Monday night in La Cana Room. The classes, conducted from 8 to 9:30 p.m., are taught by George Arnot, 1423.

Two 10-week courses in dance instruction, at \$6 per person, are being offered to beginners and intermediate dancers. The courses, including instruction in jitterbug, waltz, rumba, tango, samba, fox-trot and polka dancing, will begin Jan. 14. The exact program for each class will be determined during the first session when class members will be asked for their preference.

Practice Periods

In addition to instruction periods, practice sessions will be conducted at no extra charge when facilities are available. Instructing the classes will be Justin Heineman, 7123, and Gail Ward, 2463.

Registration for the classes is now under way and can be accomplished by calling the Coronado Club office, Ext. 37276 or 37275, and stating in which class you wish to enroll. Any refunds for the \$6 registration fee must be requested before the fourth dance session.

Two IRE Groups Plan Meetings

Two Professional Groups of the Institute of Radio Engineers have scheduled meetings, John McLay, group coordinator, reports.

Telemetry and Remote Control

The PGTRC meeting Tuesday, Jan. 15, will feature a panel discussion on the subject "Telemetry: Why and How." Discussion leaders include Stan Reynolds 5223, Tom Hoban 5214, and John Weston 5223. The meeting starts at 8 p.m. in Rm. 201 of the Electrical Engineering Building, University of New Mexico.

Microwave-Antennas and Propagation

A joint meeting of the Professional Group on Microwave Theory and Techniques and the Professional Group on Antennas and Propagation is scheduled Tuesday, Jan. 22, at 8 p.m.

Dr. B. L. Basore, 1454, will discuss "Information Theory as a Tool for Microwave Engineers." The meeting will be held in the student lounge of the Electrical Engineering Bldg., UNM.

AWS Meets Jan. 17

The American Welding Society will meet Thursday, Jan. 17, at 7:30 p.m. in the Civil Engineering Bldg., UNM, Vince Nelson, 1624-4, reports.

Jerry Wodin, Chief Engineer, Eidal Mfg. Co., Albuquerque, will present an illustrated talk on the manufacture of heavy trailers and vehicles.



SILVER WEDDING ANNIVERSARY will be observed tomorrow by Mr. and Mrs. Clarence U. Puthoff. They will mark their 25th year of marriage with an open house at 2 p.m. at their home, 420 Garcia, NE. "Whitey" joined Sandia in 1948 while it was still a part of the University of California. He later transferred to Org. 2232 where he now works. The Puthoffs came to Albuquerque from Celino, O., and now have two married daughters and 5 grandchildren.

ASQC Educational Session Is Planned

G. J. Lombardi, 5511, will lead the educational session of the Albuquerque Section of the American Society for Quality Control Monday, Jan. 21, at 7:30 p.m. He will review a paper entitled "Fundamentals of Analysis of Variance." The meeting will be held in Rm. 101 of Mitchell Hall, University of New Mexico.

At 8:15 the general meeting will feature Hugh P. Campbell, Quality Manager for the Denver Branch of Glen L. Martin Co., who will discuss "Inspection During Development and Experimental Programs."

Tech Writers to Hear Sandia Consultant On Report Writing

The Albuquerque Chapter of the Society of Technical Writers will meet Monday, Jan. 21, at 7:30 p.m. in the Southern Union Gas Hospitality Room at 8th St. and Silver Ave.

Dr. R. K. Moore, Sandia Corporation Consultant, will present a talk entitled "An Engineer Looks at Today's Report Writing."

For reservations contact John Cowan, 7123, or Justin Heineman, 7123, both at ext. 21148.

Lynn Castle Writes Article for December Mechanical Engineering

An article by Lynn E. Castle, 3124, in the December issue of Mechanical Engineering discusses some of the problems of a professional engineer in a supervisory position. "When the Engineer Becomes a Supervisor" is the title of the piece.

Members of organization 2300 were so touched by the plight of the family they chose to help at Christmas that a second round of donations was made.

Although 75 cans of food and a large quantity of fresh meat went to the family before Dec. 25, a week later additional food, clothes, toys, and some furniture were taken to the home. The family consists of a mother and her nine children ranging in age from one to 14.

Oleta Morris, 2333, one of the Sandians to visit the homes reported that there is still need for furniture.

Saves Navy Plane

Phillip Officer, son of Robert M. Officer, 2441, standing his first "wheel watch" in the Navy was credited with saving a jet plane from a wheels-up landing and possible crash at the Alameda, Calif., Naval Air Station.

The plane was approaching within 200 feet of the runway with its wheels up when Phillip was able to signal the pilot. The wheel watch involves two-hour stretches of standing at the end of a runway in anticipation of preventing such accidents.

Phillip received a commendation for "superior performance of duty" and was granted an extra day's liberty.

Sertoma Club Speaker

James D. Shreve, 5112, will speak on the subject "Atomic Nuclei At Work" at a dinner meeting of the Sertoma Club on Jan. 23. The talk, which Jim has given before various groups in Albuquerque in recent months, deals with the various applications of atomic energy and is not directly related to his work as head of the Model Studies Division, Weapons Effects Department.

Heads 20-30 Club

Elliot "Tiny" Harris, 2462-1, was recently elected president of the Thunderbird 20-30 Club. Tiny helped organize the club in 1955 as a charter member.



Wins Lighting Contest

Hard work and good ideas proved beneficial to "Rick" Hildner, 12-year-old son of Dick Hildner, 5122. Rick won second place in the juvenile division of the Public Service Company Christmas home lighting contest.

Shorthand Refresher Course Scheduled

Two new noontime Gregg shorthand refresher courses will be offered at the Corporation starting Jan. 16.

Instructors Calla Ann Crepin, 1626, and Sue Moreton, 3151, will be in room 3 of Bldg. 849 at noon on Wednesday to organize the classes. Anyone who has had shorthand before is invited to join.

The classes will be held on Mondays and Thursdays from 12:10 to 12:50 and will continue for 20 weeks.

ISA Meets Jan. 17

"Industrial Instrumentation Techniques" will be discussed by T. W. Clarke, Sales Engineer, Albuquerque Office of the Minneapolis-Honeywell Regulator Co., at the Jan. 17 meeting of the Albuquerque Section of the Instrument Society of America. The meeting will begin at 8 p.m. at 2628 San Mateo NE. Nick Sannella, 1422, secretary, reports.

Use of Metals Controls Civilization's Progress

Editors Note: A sign of the technological times is the forthcoming conference in Albuquerque on Heat Tolerant Metals for Aerodynamic Applications. As a prelude to this meeting the Sandia Lab News tells the story of the American Society for Metals and its members who are confronted with the problems of metals and the uses of metals in the future.

If you are planning a trip to the moon your biggest worry will not be hitting the target, it will be the fear of burning up.

Today there are people planning to explore the mysteries of outer space and their problems are the problems of men who know their metals best. These men, metallurgists by profession, working with teams of design engineers are delving into the problem of finding alloys which will successfully traverse the atmosphere at many times the speed of sound.

One of the most risky parts comes in the journey nearest the earth's atmosphere. Friction can turn metal alloys red hot, then white hot and the next moment it burns—like a meteor.

The progress of civilization, to

no small degree, has been governed by man's advance in the use of metals. The final breakthrough to space and interplanetary flight will depend upon extreme heat-tolerant metals.

Interest in Metals

Sandia is vitally interested in metals technology—new metal alloys, improved metal processing systems, better specifications and standards, new inspection methods and improved fabrication techniques—in the Corporation's advance research and development on the frontiers of knowledge.

From the Foundry, 2121-4, in Bldg. 840 where molten metal is poured to the Receiving and Reclamation Department 2350, the Corporation has myriad uses and interests in metals.

Metallurgical engineering is a prime concern of the Test Laboratory 1610, Material Standards 1620, the Model Shop Control, Specialties and Standards Departments 2110, 2120, and 2130, the Quality Assurance and Quality Engineering Departments 5510 and 5520, Systems Development Engineering Department 1210, Final Inspection Department 2720, the Manufacturing Engineering Systems Department 2530 as well as Design and Research organizations.

24,000 ASM Members

In these organizations many of the men who work with metal belong to the American Society for Metals, a national society with 24,000 members. The ASM promotes an aggressive educational program for members and is the largest publisher in the world of books for the metals industry.

The ASM Metals Handbook is known as the "bible" of the metals industry. In addition ASM publishes the monthly Metal Progress, the engineering magazine of the metals industry, and the Metals Review, a news magazine of ASM chapters' activities and a review of metal literature.

As an indication of the tremendous dissemination of engineering information, a compilation shows that in one year ASM collected, edited, published and distributed more than one hundred million pages of engineering information on the subject of metals.

ASM devotes time, money and effort to its extensive counseling services to students. Scholarships and Achievement Awards are part of this service.

Sponsor Seminars

Scientific seminars and conferences sponsored by ASM attract thousands of engineers each year. ASM sponsors the visiting lecture ship for lecturing and holds seminars on engineering subjects pertaining to metals. ASM sponsors and participates in the National Metal Congress, the National Metal Exposition, and the biennial Western Metal Congress.

Each local chapter also organizes and sponsors regional conferences and seminars. The Albuquerque Chapter of ASM in the first year its charter was granted held a conference jointly with the University of New Mexico on "Investment Castings" in April, 1955.

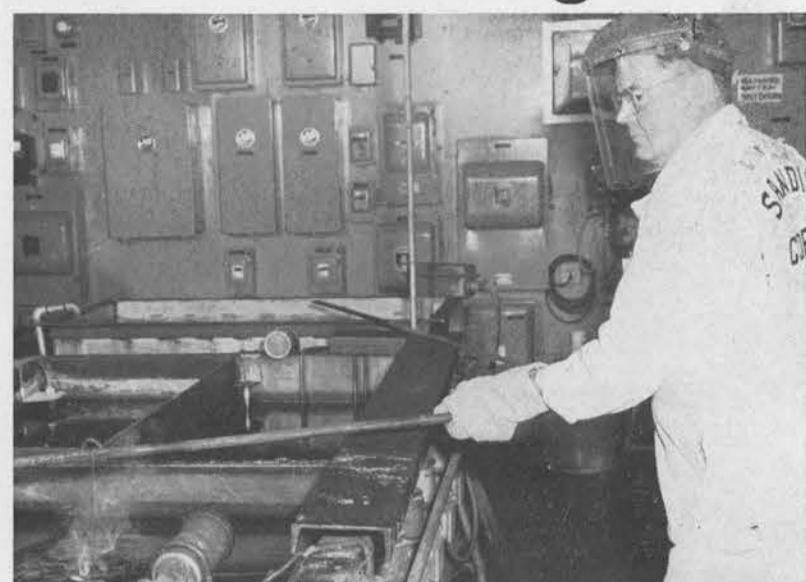
On Jan. 28-29 a second conference, "Heat Tolerant Metals for Aerodynamic Application" is scheduled with outstanding speakers from Sandia Corporation, the metals and aviation industries.

The Albuquerque Chapter began as an extension of the Los Alamos Chapter. It was necessary to interest 30 members in the Albuquerque area before a separate chapter could be chartered. This was accomplished early in 1955 and the national president of ASM presented the charter in Albuquerque. In a little more than a year and a half the chapter has grown more than 50 per cent.

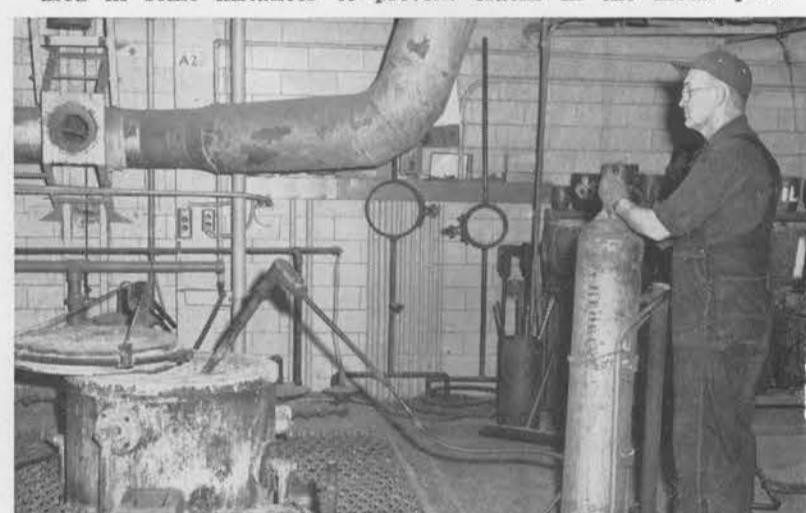
Local Chapter Active

The Albuquerque Chapter has sponsored conferences, field trips, and outstanding speakers to promote education and interest in the metals industry. The group initiated and installed a student chapter of ASM at the New Mexico Institute of Mining and Technology at Socorro.

Sandia Corporation personnel have been singularly honored by election to chairmanship of the Albuquerque Chapter. J. L. Abbot, a Corporation employee at the time, was the first chairman in 1954-55; K. E. Mead, 1621, was chairman in '55-'56 and R. S. Lemm, 2130, is the current chairman. Doug Ballard, 1624, is secretary and A. W. Porter, 2112, is treasurer.



COOLING METHODS used on heated metal determines to some extent the hardness, strength and other mechanical characteristics of the metal part in process. Here Logan Sumpter, 2121-3, lead operator in Sandia's Heat Treat Shop in Bldg. 840 cools a steel part in an oil bath. This is a rapid method of hardening metal used in some instances to prevent cracks in the metal part.



OF BASIC IMPORTANCE in any metal processing is the Foundry. At Sandia Corporation operators such as Charles Riley, 2121-4, carefully melt non-ferrous metals and skillfully pour the castings, bubbling through a pot of molten aluminum to remove hydrogen.



MICRO-STRUCTURE of a metal specimen is studied by Keith E. Mead, Supervisor of the Metallurgical Section of the Materials Laboratory Division, 1621. The instrument used is a Balphot Metallograph which enables the operator to see crystal structure, impurities, inclusions and distribution of ingredients in the specimen. The Metallograph includes a camera to make photographic records.



CONTROLLED ATMOSPHERE is often important in melting and pouring metals because elements in the atmosphere can combine with the metal and cause undesirable characteristics. Don Johnson, 1621-2, readies a special controlled atmosphere melting unit for use.

PROMOTIONS

ALAN Y. POPE to manager of Aerodynamics Department, 5140.

He succeeds George Hansche who was transferred to Manager of the Experimental Weapons Research Department, 5130.

Alan has been with Sandia Corporation five and one-half years and has been supervisor of Experimental Aerodynamics Division 5142 since Aug., 1952.

From 1941-51 he was a professor in the Aerodynamics Department at Georgia Institute of Technology.

Alan received both his Bachelor's and Master's degrees in Aeronautical Engineering at Georgia Tech.

He worked one year for the National Advisory Committee for Aeronautics at Langley Field, Va.

He is an associate fellow of the Institute of Aeronautical Sciences.

While at Georgia Tech and since coming to Sandia, Alan has had several books published. They include: "Wind Tunnel Testing," "Aerodynamics of Supersonic Flight," and "Basic Wing and Airfoil Theory." A new book, "Supersonic Wind Tunnel Design," is now being prepared for the Navy.

Donald MacKenzie Retires; Remains As Sandia Consultant

Sandia Corporation's Patent Manager, Donald MacKenzie, is now serving as a consultant following his retirement on Dec. 31.

Mr. MacKenzie had been with the Corporation four and one-half years.

Previously he was employed 11 years in the patent office of Bell Telephone Laboratories.

Mr. MacKenzie has a law degree from LaSalle Extension University in Chicago and a BA, MA and PhD from Johns Hopkins University in Baltimore. He is a registered patent attorney.

His family includes a wife in Albuquerque and two sons living out-of-state.

The MacKenzie's make their home at 2711 Vista Larga, N.E.

CHARLES R. BARNCORD to manager of the new Engineering Department 1810 at the Livermore Branch of Sandia Corporation.

"Barney" started work in the atomic weapons program in the experimental shop in Los Alamos in Jan., 1946, and a year later transferred to drafting at Sandia. From 1949-50 he was liaison engineer and in Sept., 1951, was made supervisor of 1231. He has been at Livermore for 16 months.

During his three and one-half years in the Army, he was stationed at Los Alamos for a time.

Prior to Army service Barney was employed two years by aircraft plants in Wichita, Kans., as a sheet metal fitter.

He attended Ohio State University, Kansas State Teachers' College, and received his Bachelor's degree in Mechanical Engineering from the University of New Mexico in 1948.

He is a member of the American Society of Mechanical Engineers.

JOHN E. MILLER to supervisor of Field Office Service Section 2544-1, Los Angeles Branch of Sandia Corporation.

John started with Sandia in Jan., 1950. His first jobs were in organizations 2220, 2221 and 2330, then two years ago he was assigned to the Los Angeles field office to work in expediting.

Prior to moving to Albuquerque John was seven years with General Mills, Inc., Minneapolis, Minn., where he was employed in the accounting department of the mechanical division.

During World War II John served in the Infantry in Europe.

The Millers reside in Canoga Park, Calif.

Technical Institute Panel

Noble Johnson, supervisor of the General Employment Section 3151-2, was a member of a panel on Technical Institutes at a meeting in Phoenix Dec. 27. The panel was part of the program of the annual meeting of the American Society for Engineering Education and was held at the University of Arizona.



Donald MacKenzie

Previously he was employed 11 years in the patent office of Bell Telephone Laboratories.

Mr. MacKenzie has a law degree from LaSalle Extension University in Chicago and a BA, MA and PhD from Johns Hopkins University in Baltimore. He is a registered patent attorney.

His family includes a wife in Albuquerque and two sons living out-of-state.

The MacKenzie's make their home at 2711 Vista Larga, N.E.

783 Staff Aides Speed Sandia Engineers' Work

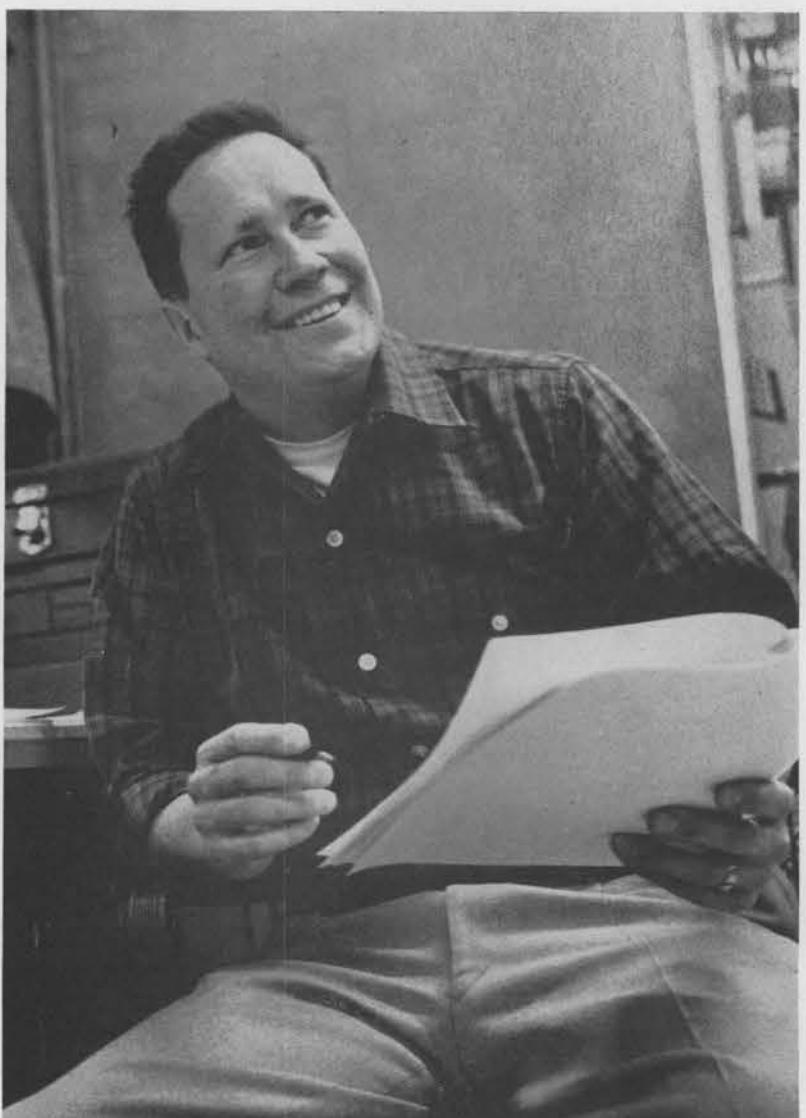
Wanted: Staff Aides

Persons who under moderate technical direction and with latitude for exercise of initiative and judgment plan, coordinate and perform technical operations of specific assignments. This involves performing technical task assignments of analytical and investigative nature in one of the following or similar fields:

- a. Performing, at the breadboard stage, experimental operations on mechanical or electrical apparatus or equipment from general technical instructions including detail mechanical and minor electrical design without the responsibility of broad planning.
- b. Planning and executing laboratory or field experiments and investigations and correlating and interpreting observations.
- c. Making mathematical calculations that re-
- d. Developing design details of apparatus, equipment and facilities of average complexity including the preparation of layouts of plant facilities, mechanisms or structures.
- e. Performing experimental measurement operations, taking data and reducing data of complex nature involved in engineering and scientific activities.
- f. Performing liaison activities of a technical nature involved in relation with outside companies, the military, sub-contractors and others.
- g. Performing work operations at remote locations, under field conditions, including setting up complex equipment, improvising new test set ups and performing ground station operations to obtain information for engineering use.
- h. Making analysis of engineering drawings, manufacturer and inspection processes and the preparation of engineering specifications or written material of average technical complexity.



George Sheridan
—fuzing systems, printed circuitry—



Robert S. Neiman
—high voltage pulse generator—

quire an understanding of basic engineering theories such as transmission, probability and statistics, and of the mathematics peculiar to such theories.

Sounds pretty impressive?

Yes, but no more so than the performance of Sandia's newest technical group, the 783 employees who are called technical staff aides. At present the engineers and other graduate professional people outnumber the technical staff aides, two to one, but the ratio is changing rapidly as more and more opportunities are being found to use the specialized training and experience of the Technical Institute graduates.

In regular visits to some 25 Technical Institutes throughout the country representatives of the General Employment Section, 3151-2, headed by Noble Johnson, are rounding up the cream of the crop to come to Sandia to fill jobs like the one from which the description above is quoted.

Prefer Challenges

The best graduates pass up the more conventional positions offered in other industries, prefer instead the greater freedom, challenge, and opportunity to exercise their own inventive and creative ability here at Sandia.

Under Noble Johnson's guidance and assisted by John Timmins, the technical staff aide recruiting and utilization program has been stepped up in recent months to a point where these Technical Institute graduates are being hired at a faster rate than are graduate engineers—and the R&D line organizations using these people to supplement their staffs are turning in more enthusiastic reports every day.

The demand for good technical staff aides is increasing throughout the country as industry finds more and better ways to use these skilled specialists to help ease the shortage of engineers. In a recent eight year period the enrollment in technical institutes increased 165 per cent. At the same time the enrollment in engineering colleges increased 143 per cent.

Tasks Not Routine

The tasks of technical staff assistants and technical staff associates are far from routine at Sandia. But to qualify for Sandia assignments they need extensive experience or technical institute training—or both.

G. A. Fowler, Vice-President in charge of Research at Sandia Corporation, describes the technical staff assistants' work this way:

"The project engineer has responsibility for the design of a complete system. He depends heavily on technical staff assistants and staff associates to develop and build components of this system and also to set up and perform the final tests on these components."

The engineer in charge of a project may give the technical staff aide a rough idea of what is needed in the way of a device to do a certain job and then leave it up to him to design and develop the item. This may involve sketching out the circuitry, getting a drawing made up by the drafting organization, procuring the materials needed to fabricate a "breadboard" model, working with the machine shops in obtaining needed mechanical parts, arranging for environmental and operational tests, and a dozen other related tasks as he follows the job through.

Some technical staff aides are called upon to visit suppliers plants to check on the manufacturing arrangements, the progress of production, and the quality control and inspection techniques being used.

Varied Backgrounds

Sandia's technical staff aides have varied geographical and social backgrounds. They are of all ages, they come from almost every state.

However, there is a similarity in their educational background and their personal interests. Many are graduates of technical institutes. A large percentage has been scientifically inclined since childhood. Those who have had military service found Uncle Sam taking advantage of their technical skills. Many of them served in military communications and maintenance work.

As part of Sandia Corporation's technological staff, the technical staff aides work hand in hand with the scientific and professional members of the staff. The research scientist plans and conducts research which leads to new ideas, the

practical scientist and engineer develops the designs and procedures for the applications of these ideas, and technical staff assistants and technical staff associates handle many of the details necessary to do the job.

Which member of the staff is the most important? Which is the most important leg of a three-legged stool? Remove any one and the stool topples.

783 Staff Aides

Sandia's 783 technical staff aides are scattered throughout the Corporation, but most of them are in the Research, Development and R&D Technical Services organization.

Even in their hobbies they have similar preferences. Good music is popular among Sandia's technical staff aides and this results in a common interest in building hi-fi systems. They are amateur radio operators and build their own transmitters. They keep their automobiles tuned to perfection and practically all of them are handy-men-around-the-house.

The Sandia Lab News talked to three men in this group and here are their stories—fairly typical of their fellow SA's.

* * * *

George Sheridan, technical staff assistant in Project Division 1216, was introduced to his technical career in the Air Corps during World War II—he became an airborne radio operator and master sergeant.

After his military service he enrolled in a technical institute where he studied basic electronics, radio and television design, and mathematics. After completing his work George operated his own TV repair and sales company in Phoenix.

George came to Sandia in April, 1951, and was assigned to electronic fabrication work in the model shops. In June of 1952 he transferred to Engineering Department 1210 and has been there since.

George's Sandia work now is with fusing systems and printed circuitry. He helps prepare tests of these systems and writes the reports of the tests.

A native of Phoenix, George is married and has two sons, Scott 7 and Michael 5.

"Scott seems to be inclined to be a musician," George says and then points out that this may be because of the family's enjoyment of hi-fi music. Like so many men in the field of electronics, George has the hi-fi "bug".

* * * *

Robert S. Neiman, Jr., is a technical staff assistant in the mechanical shop of the electro-mechanical laboratory, Weapons Research Division II, 5133.

Bob's work is with the group which helps determine feasibility of proposed ideas on weapons. His job is to answer questions which boil down to: "Will it work?"

He speaks enthusiastically of the work of the technical staff assistant in the Sandia research programs. "In research there is always something new, different and challenging. Work is never routine."

After graduation from high school in Indianapolis Bob went to work for a jewelry manufacturing firm as a machinist in the tool and die department. During the war he worked in the development and design division at a Naval ordnance plant. Part of his work was with the Norden bomb site. After nine years with Naval ordnance he came to Sandia Corporation in December, 1952.

One of his tasks at Sandia was to develop a high voltage pulse generator which would generate a pulse of 60,000 volts of known amplitude with not more than 5 per cent deviation.

Bob is married and has two sons, Stephen 9 and Michael 2. And he has the hobbies of the trade.

"I love music, I'm a hi-fi fan, and have a good set of power tools for woodworking," he reports.



Ernest Yaeger
—electro-mechanical analysis—

(See STAFF AIDES, page five)

Sandia Toastmaster Speaker of Year Competition Starts

Annual competition for "Speaker of the Year" award of the Sandia Toastmasters Club will start with groups competing Jan. 17 and 24 at 6:30 p.m. at the Coronado Club. Six speakers will compete each night.

The Jan. 17 event will feature Nate Wineberg 2543-2, 1956 award winner, Jimmy Williams 1444, Roger Johnson 2111, Bob Nelson 7421-1, Hal De Arment, AFSWP, and Wayne Keyes, USN.

Jan. 24 the competing speakers will be Ron Hayenga 1441, Hal Catt 4121, Lee Deeter 1440, Pat Patterson 5250, Ken Sutton 3151 and Art Jones 2564.

Two winners from each group will be selected for final competitions scheduled late in February. Guests are invited to both events. Anyone interested should contact John Wilkinson, 1441, Ext. 29147.

Basketball League Reorganized; 17 Teams Now in Competition

A recently reorganized Sandia Corporation Employees Basketball Association now has a total of 17 teams competing. Two new teams were integrated into the League and a new series of play began Jan. 2. Plans call for each team to play every other team once.

All games are held in the Old Base Gymnasium each week night except Friday. Three games are played each night strating at 6:45, 8:00, and 9:15.

—SERVICE AWARDS—

Five Year Pins

Jan. 4-10

Thomas Tangney 2452, Charles Taft 7326, Wilfred Bullock 2412, Kenneth Patterson 4131, Sherwood Embry 2461, Ludwig Eversord 2232, Flavio Gonzales, Jr. 2112, Betty Womack 2333, Charles Lewis 5523.

Thomas Marshall 1462, William Moore 5214, Dale Irving 2122, Melba Griege 4162, Richard Smith 2411, Ormand Williams 2722, Erwin Filsinger 5531, Juan Herrera 2418, Adenago Perea 2232, Frances Wright 4135, Thomas Reinhardt 2531, Lorenzo Garcia 2112, an Martha Tuff 2152.

Jan. 11-17

Edwin F. Johnson 1634, Florence M. Smythe 2231, William J. Daly 1221, John J. Flanigan 7412, Candelaria Garcia 2112, Elliot W. Harris 2462, Robert D. Wehrle 1461, Elzie A. Greene 5511.

Beatrice F. Dusek 4135, Jerry F. Dusek 2722, Joseph C. Torres 2417, James E. O'Connor 7232, Helen L. Moulder 2461, and George H. Lester 2414.

Jan. 18-24

John C. DeBaca 2232, Guy W. Jones 7242, Ruth N. Brown 2111, George O. Thorne 7241, Joseph Paruta 2721, Estella T. Baca 2351, David L. Brown, Jr. 4152, Wallace A. Hansen 7412.

Lee L. Hofer 2113, Arnold C. Lamb 7241, C. R. Meister 2442, Henry T. Flowers 2234, Lamar D. Treadwell 2111, Dain S. Cone 5522, Altman Jones 2112, Jack W. Reynolds 7214.

SHOPPING CENTER

CLASSIFIED ADVERTISING

Deadline: Friday noon prior to week of publication.

RULES

1. Limit: 20 words
2. One ad per issue per person
3. Must be submitted in writing
4. Use home telephone numbers
5. For Sandia Corporation and AEC employees only
6. No commercial ads, please

Next Deadline: Noon, Jan. 18

FOR SALE

COAT, new, hand-tailored, size 7, flannel and mink lined. Anaya, Alb. 6-6251.

COLLIE PUPPIES, registered, outstanding pedigree, 3 mos. old, reasonable. Meek, Alb. 2-1185.

'49 STUDEBAKER 5 pass. starlight coupe. R&O, climatizer heating system, economical on gas, oil; tires good; \$250. Shew, Ext. 32234.

CHAIRS, TABLE, six chrome chairs and linoleum top wood table, \$40. Gowdy, Alb. 3-8216.

'54 RANCH WAGON V8, H&O. One owner car w/low mileage, \$1350. Strome, 4004 Hannett Ave. NE, Alb. 6-3469.

'51 CHEVROLET, 2 dr. sedan, heater and power glide, \$425. Slaton, Ext. 3-3173.

SKIS, 6'9", bindings, poles, \$25. Electric roasterette \$5. Corn popper \$2. Ironstone washbasin and pitcher. Copeland Alb. 5-4688.

BABY BUGGY \$15. Saw w/10" blade, dada, sander, 3/4" HP motor, \$70. '49 Kaiser Deluxe, \$225. Black, Alb. 5-8326.

4 NUTRIA BEAVER, 1 producing pair w/2 young. Ready to breed, \$175 takes all. Fisher, Alb. 4-0453.

Continued From Page One—

Income Tax

me, just show me, where it says Item 11 in these instructions!

Without taking sides on this particular issue, it might be suggested that everyone who may have to file a return (including anyone whose income was less than \$600, but who wants a refund for tax withheld) should read carefully the instruction book which the government provides free. Since there is usually some change in the tax laws each year, you might miss a deduction or exemption to which you are entitled if you fill out the form without first reading the instruction book.

Then of course we'll enter it in Item 11. Where else would you put it? Let's try to be intelligent about this thing Alice!

Yes, Alice, try to be intelligent about these tax matters. Remember how stupid it was of you not to give birth to the twins before midnight December 31, which would have qualified two more dependents for 1956? And if that weren't bad enough, how about the \$5,000 you won on that quiz program? Didn't you realize that such a prize was taxable?

Doesn't this take the cake. Look at this Alice. How can those tax people in Washington expect me to remember every little doctor bill I had to pay for the last year?

You can itemize and deduct all medical-dental expenses in excess of 3 per cent of your income, within certain top limits. Be sure to

list fees of doctors, dentists, hospitals and nurses. You may not deduct expenses paid or reimbursed by insurance, but your medical insurance premiums count as medical expense.

Now, Ralph, do you remember when you twisted your back removing the storm windows last August? If you were absent from work due to an injury and received "sick pay" from your employer or his insurance company, you do not have to pay tax on \$100 per week of this income. The same applies to sickness, except that unless you were hospitalized for at least one day, the payments for the first seven calendar days of absence are not tax free.

How long have you been hiding these receipted bills and cancelled checks in this desk drawer? Fine thing, Alice! What if you forgot where you put them?

There is little chance that Alice has forgotten where she was carefully filing the receipts of bills paid. She knows you must keep receipted bills and cancelled checks to prove payment of such important, deductible items as state and local taxes, interest included in mortgage payments, union dues, the fee Alice had to pay the employment agency for her part-time job, and child care expenses (you may be entitled to a deduction of up to \$600 if, while you worked, it was necessary for you to pay someone to care for a child under 12 or anyone who is physically or mentally incapacitated).

I give up! This is impossible. Alice, we'll just have to go to jail.

This fight may be over late in the 14th round of April. It happens to the best of last-minute filers: The form wins by a TKO. If you want to give yourself the best possible break on your federal income tax, the American Institute of Accountants advises that you prepare your return carefully, file early and save your records to back up deductions. And, if you find that Uncle Sam owes you money, early filing means a quicker refund.

Alice, Please! How can I concentrate on this newspaper when you interrupt with silly questions? Naturally, I'll look over your figures before I sign the form. And Dear, when you mail it—don't forget to put a stamp on the envelope.

OVERHEAD GARAGE DOOR, \$25. Trujillo, 7426 Sky Court Circle NE, Alb. 5-8933.

3 BR. HOUSE, 1 1/2 baths, gas range, refrigerator, carpet, walled yard, landscaped, \$10,500. Will consider renting. Wheeler, Alb. 6-6230.

'52 BUICK SUPER CONVERTIBLE, good top, dynaflow, 5 almost new oversize tires, R&H, \$795. Moore, Alb. 6-2568 after 5.

AUTOMATIC WASHER, Bendix, Cooper, Alb. 9-2356.

'50 BUICK, 2 dr. grey, Dyn., R&H, WW, TS, or '41 Chevrolet, 4 dr. R&H. Maupin, Alb. 6-1545.

'50 FORD, RHO, new tubless tires, \$250. Hi-Fi set, complete, RC88, diamond stylus, 20 watt amplifier, pre-amp, bass reflex speaker, \$250. Martin, Ext. 47285.

PORTABLE ELECTRIC MIXER, Oster, new, \$12; GE steam iron, \$7.50; boy's bike, \$15. Sherwin, Alb. 9-8866.

'48 OLDSMOBILE, 4 dr., R&H, good tires, \$150 cash. Stephenson, Alb. 5-0298.

TRAIN ACCESSORIES, Lionel, Laskar, Alb. 9-1024.

SUMMER CABIN, Sandia Park, huge fireplace, pine paneling, approx. one acre. Reasonable terms. Jamieson, Ext. 46236.

V-M TAPE RECORDER, Model 700 Tapeomatic portable, \$115. Original price \$180. Taylor, 7709 Hennett NE, Alb. 9-2281.

AUTOMATIC WASHER, \$100, cash or terms; blond bedroom suite, \$75; study desk, \$15; bookcase shelves. Hunter, 2315 Hendon Dr. NE, Alb. 9-1089.

'54 CHEVROLET, 4 door, 210 series. Adams, Alb. 6-3895.

BEAR HUNTING BOW, 61 pound pull, dozen hunting arrows w/leather quiver. Roth, Alb. 3-0522 after 6 p.m.

AUTOMATIC IRONER, Bendix (console model), Wyche, Alb. 5-8554.

5-ROOM ADOBE conveniently located near Univ. on block-long street. Low down payment. Chapin, Alb. 2-6429.

'56 CUSHMAN SCOOTER, \$250. Ouellette, 7605 Euclid Ave. NE.

MEN'S HOCKEY SKATES, size 8, \$6. Girl's bike, Schwinn, 20 in., \$25. Navy officers blues, overcoat, cap, size 40, \$35. Fossum, Alb. 5-0535.



PRACTICING PING PONG for the Sandia Corporation tournament scheduled to start at the end of January are Bob Black, 5142, left, and Jim Strascina, 5142. Players in the tournament will first compete within each superintendency in both singles and doubles categories and then the final Corporation champs will be determined in playoffs. Anyone interested in competing in the tournament is urged to contact their organizational representative.

Staff Aides . . .

Ernest Yaeger, who works in Sandia Corporation's Operations Division 7311, was an eighth grader in Ohio when his father suggested he take a correspondence course in radio.

His father's advice was followed, happily. Since that time Ernie has worked extensively in radio, electronics, communications and television fields. His first job after completing school was as a motion picture projectionist.

"They liked my work," he recalls, "because I could keep the machines running with a minimum of breakdowns."

Then came World War II and Ernie entered the Army. Immediately his technical aptitude was recognized and he was trained in radio maintenance then put in charge of a radio maintenance section and sent overseas. For three years he helped keep Uncle Sam's equipment in shape through the rigors of the North African and Italian campaigns.

Following the war he enrolled in a technical institute, and studied for two years. After graduation he remained at the institute as an instructor and in charge of television equipment maintenance. Later he had three years experience with the Radio Corporation of America in Indianapolis as a television test line trouble shooter.

He has been at Sandia Corporation for five years. Ernie's specialty is performing engineering analysis

5th Annual Bowling Tournament Starts At Coronado Club

The fifth annual Coronado Club Men's Handicap Bowling Tournament is scheduled for Jan. 26 through Feb. 3. The tournament is sanctioned by the American Bowling Congress and all club members who hold a 1956-57 ABC card in any league are eligible to participate.

Included in the tournament categories will be five-man teams, two-man teams, singles and all events. Members may enter singles or doubles without participating in the team events.

Handicap will be calculated at 75 per cent of the difference between the bowler's average and 200. Entry fee in each event is \$2.25 with an additional charge of 25 cents for entry in all events category.

Prizes will be awarded at the rate of one for each six entries plus a new bowling ball to the all events winner. Other special prizes and trophies will be awarded.

Entry blanks are available at the bowling center at the club or from league secretaries. Deadline for entry is 5 p.m. Wednesday, Jan. 16.

on electrical and electro-mechanical components and making engineering reports to provide information to engineering organizations which can be used to influence future designs.

SHOPPING CENTER

GIRL TO SHARE APT. Beautifully furnished, share with 2 other girls. Bode & Parr, Alb. 8-2157.

TELEVISION; Got a new TV? Your old one would be enthusiastically welcomed by a lady in the Home for Aged. Strand, Alb. 6-7371 evenings.

TO TRADE '51 Buick. Special for '55 Buick Century. Corey, Alb. 3-0517.

RIDERS to share expenses going to Solar Furnace Symposium, Phoenix, Ariz., Jan. 21, 22; leave Jan. 20—return Jan. 23. Joe, Ext. 4-0256.

PLAYER PIANO ROLLS, Walston, Alb. 8-0628.

3 BR. HOME, one acre, Valley; trade or sell 2 br. home. Amorette, 1827 Neat Lane SW, Alb. 3-8928.

HOMES FOR KITTENS, two Siamese, both eight months, pedigreed, female. Trained to scratching post. Exceptionally friendly. Robnett, Ext. 44298.

TO TRADE Topaz stone estimated value \$100 for Daschund puppy. Harley, Alb. 6-0295.

LOST AND FOUND

LOST—RING, garnet w/2 diamonds; ear-ring, silver; scarf, white silk; trunks, men's; keys, in leather case; pen, Schaeffer, black and gold; earring, brown stone; wallet, black w/ID; keys, on ring. Lost and Found, Ext. 26149.

FOUND—PEN, Shaeffer; earrings, button type; glove-mit, w/sheep skin lining; key, GM No. 8639. Lost and Found Ext. 26149.

FOR RENT

3 BR. HOUSE, 1250 sq. ft. living space, kitchen furnished, newly painted, enclosed very large yard, Country Club section. Silva, Alb. 3-0191.

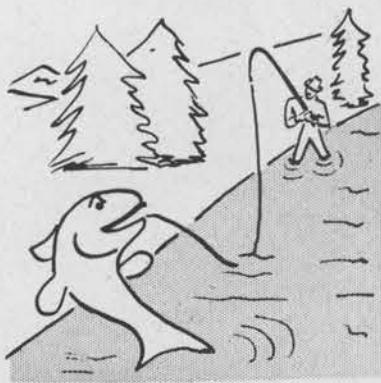
WOMEN'S DORMITORY ROOMS, furnished; kitchen, laundry facilities; linen, maid service; television; walking distance to work, \$45/mo. Base Housing Office, 21254.

WANTED

TO TRADE German Mauser hunting rifle 8 mm for Luger pistol. Smith, 8607 Menaul, Alb. 9-1096.

MOUNTAIN LAND or lot in Sandia Mountains. Must have water. Souder, Ext. 35156.

You Get An Extra Plus Working at Sandia



Retirement Plan

After an employee has been at Sandia Corporation for a year he begins saving for his retirement days. This retirement normally occurs at age 65.

The amount the Corporation contributes to this retirement plan is considerably larger than that which the employee contributes.

As an example of retirement benefits, an employee earning \$5,000 per year with 30 years service will receive, at age 65, a pension of about \$2,100 per year.

If an employee terminates at any time, he may either elect a refund of his own contributions plus interest or leave the contributions with Prudential for a pension at age 65. If, when he terminates, an employee has met certain "vesting" requirements, the amount contributed on his behalf by the Corporation will remain to his credit for use in purchasing a pension for him at age 65. An employee is vested in this plan when, prior to termination of employment, he has contributed to the plan for at least 120 months and was at least age 45.



Service Recognition Program

Even a casual glance around Sandia Corporation work locations will disclose many employees proudly displaying two-year certificates and pins denoting longer periods of service.

At the end of two years service an employee is given a certificate and after five years a pin is awarded. Those with 10 years service receive an emblem mounted on their choice of jewelry. More than one-third of Sandia Corporation's employees have already earned their five-year pins and the number is steadily growing.

A Sandia employee designed the service award emblem, a Thunderbird on a pentagonal shield. It was chosen by employee ballot from several hundred suggestions.



Hospitalization-Surgical Insurance

Economical protection against unexpected hospital bills, doctor bills, surgical bills, etc., is provided in a specially designed hospitalization-surgical benefits plan.

Participation in the plan is optional. The insurance provides much greater coverage than most private or group health insurance plans and the cost is well below that paid for comparable coverage on an individual basis. Premiums are paid by payroll deduction.

During the first 10 months of 1956, Sandia Corporation employees received settlement checks totaling \$295,451.02 under the plan. There are now more than 5,000 employees and their families protected by the insurance. New employees may enroll when they join the Corporation. Other employees may join the plan during designated periods, choosing the individual plan (\$2.16 per month) or family plan (\$7.77 per month).



Life Insurance Counseling

Insurance counselors maintain an office on Corporation premises where employees may secure insurance information and advice at no obligation to them. Insurance experts are on hand during working hours to assist employees in reviewing their personal life insurance programs.

Employees may purchase regular forms of life insurance from the Minnesota Mutual Life Insurance Company through these counselors and pay the premiums by payroll deduction.

To supplement this insurance the Corporation provides a retirement plan with survivor benefits, free Group Life Insurance, special hazard insurance as mentioned elsewhere on this page.



Educational Aids Program

It's convenient to learn while you earn when working at Sandia Corporation — and the Corporation will give financial assistance to employees holding bachelor's degrees, who wish to continue their college work and who qualify under the provisions of the Educational Aids Program.

This program provides for a fifty per cent tuition refund on successful completion of job-related college courses plus a limited amount of time-off to qualified college graduates when such courses are not available out-of-hours.

Also, a counseling service on college work is provided by the Staff Training and Education Division which works with the University of New Mexico to make available through evening classes a variety of courses in which Sandia employees are interested.



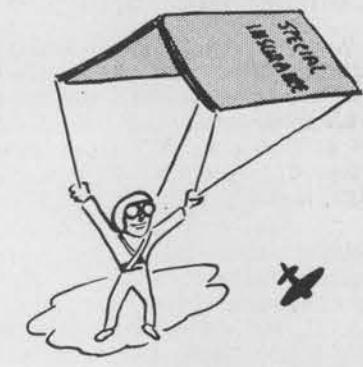
Sick Leave

Income for Sandia Corporation employees does not stop when personal sickness strikes. All employees accrue sickness absence credits (to a maximum of 90 days) at the rate of 1½ days per month during which pay is received for 90 straight-time hours.

Thus, an employee who has maximum accrual may get as much as 18 weeks full pay if he suffers a prolonged illness or injury.

An employee may start using his accrual on the third consecutive day of sickness absence. This may be considered as an additional insurance policy to the employee as it is "money in the bank" when misfortune strikes.

In addition, an employee may use sick leave under certain conditions in case of death in the immediate family and quarantine.



Special Insurance

Employees of Sandia Corporation are covered by a \$10,000 life insurance policy while they are traveling in commercial aircraft on Corporation business within the continental United States.

Employees engaged in hazardous work receive special insurance protection. Hazards insurance covers death, total or permanent disability. Employees with dependents are insured for \$50,000 and employees without dependents are insured for \$20,000. This policy applies anywhere in the world and includes flights in military aircraft.

Private policies which might be voided as a result of the hazardous activity or air travel are guaranteed up to certain limits and under certain conditions.

All this added protection costs the employee nothing.



Group Life Insurance

After two years of service with Sandia Corporation, employees are covered by a group life insurance plan provided by the Corporation at no cost to the employee.

The policy provides for a payment equal to six months base pay to be made to the beneficiary designated by the employee, in the event of his death. The amount of the coverage increases to nine months base pay upon completion of seven years service and then to a maximum of one years salary after 10 years of service.

This free protection is supplied without medical examination. Sandia Corporation employees consider this a valuable supplement to their private life insurance program.

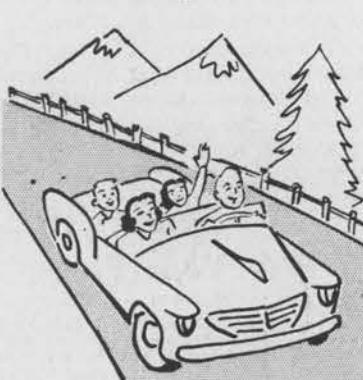


Military Leave

Employees who enter military service for extended active duty are granted liberal benefits including payment of a differential allowance, accrual of sick leave while in military service (up to 90 days) and full reinstatement rights upon their return.

In addition, those who are members of the National Guard or Reserve organizations may be allowed time off for summer camp or other intermittent training. They receive a differential allowance for up to two weeks absence for training duty.

Because of the vital nature of the work in which Sandia Corporation is engaged, every effort is made to obtain occupational deferments for employees in critical occupations until a replacement can be obtained when they are called for military service.



Vacation With Pay

Sandia employees enjoy a liberal vacation plan.

They accumulate vacation time at the rate of two days for each calendar month in which pay is received for 90 straight-time hours. This amounts to 24 days per year in vacation accrued.

A conscientious effort is made to schedule vacations so that they meet the employees' wishes and the job requirements. In order that employees may derive the benefit of a complete rest from normal work routines, it is the Corporation policy to require that annual vacations be scheduled for minimum periods of two consecutive work weeks. Additional vacation absence may be arranged in shorter periods.



Payroll Deductions

Employees have available to them the service of payroll deduction for a number of items. U. S. Savings Bonds, life insurance, Credit Union transactions, Union dues, Coronado Club dues, Community Chest contributions and hospitalization insurance are among the authorized payroll deductions.

An itemized report of these deductions is made to each employee at the end of the month.

This service makes writing of a number of checks unnecessary and saves trips each month to various offices to make payments. In addition, if you wish, your pay check is deposited in the bank of your choice.

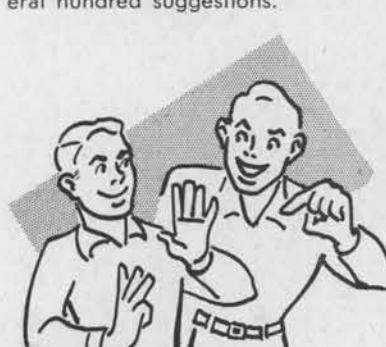


Sports Programs

Year-round sports are available to the athletic minded Sandia Corporation employee. Equipment, officials, trophies and facilities are made available to participants through Employee Services.

Basketball, softball, volleyball, bowling, golf and tennis are among the most popular. These sports are coordinated through a central office which schedules games, purchases equipment and provides officials.

Most of these activities are provided at no expense to the participant. Even noontime recreation facilities such as table tennis and horseshoes are made available to employees in many locations throughout the Sandia Corporation area.



Holidays With Pay

Eight holidays are regularly observed by Sandia Corporation employees at Sandia Base:

- New Year's Day
- Washington's Birthday
- Memorial Day
- Independence Day
- Labor Day
- Veterans' Day
- Thanksgiving Day
- Christmas Day

Holidays which fall on Sunday are observed on the following day.

The holiday schedule for Sandia employees at other locations may vary somewhat to match local practice.



Leaves of Absence

Leaves of absence may be granted under various circumstances. Each case is considered on its own merits.

Leaves are granted for sickness, disability, maternity, service with the armed forces, school attendance and other compelling personal reasons. This recognition of the personal influences in the life of every employee is indicative of the Corporation's efforts to treat its employees as individuals, not mere statistics.

An itemized report of these deductions is made to each employee at the end of the month.



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